

AMENDMENTS

Please amend the application as indicated hereafter.

In the Specification

In the paragraph on page 1, lines 3-6:

This invention relates generally to the field of communication technology, and in particular, to methods of improving the method of entering a number on a communication device by completing a partially entered number with a matching number from a stored telephone number.

In the paragraph on page 2, lines 20-26:

Current auto-completion algorithms do not provide for suggesting completions for telephone numbers being dialed with a communication device. Implementing an automatic completion feature for a communication device presents several complicated issues. The implementation must be able to: 1) differentiate between accessing an address book entry, ~~verses~~ versus directly dialing a telephone number; 2) find appropriate candidates to suggest as completions based on numbers which have been entered; and 3) process long distance numbers and special dialing situations.

In the paragraph on page 3, lines 16-23:

When an item is being entered into the communication device, the call history and telephone book entries are examined to determine if there is a match with the currently entered digits. If one or more matches are found, the matches are presented as a candidate matches. A user utilizing a communication device which incorporates the present invention can then select one of the presented candidate matches. These and other aspects, features, and advantages of the present invention will be more clearly understood and appreciated from a review of the following detailed description of the present invention and possible embodiments thereof, and by reference to the appended drawings and claims.

In the paragraph on page 4, lines 17-24:

Fig. 1 is a system diagram that illustrates an exemplary environment suitable for implementing various embodiments of the present invention. Fig. 1 and the following discussion provide a general overview of a platform onto which the invention may be integrated or implemented. Although in the context of the exemplary environment the invention will be described as consisting of a instructions within a software program being executed by a processing unit, those skilled in the art will understand that portions of the invention, or the entire invention itself may also be implemented by using hardware components, state machines, or a combination of any of these techniques.

In the paragraph on page 7, lines 15-25:

In an exemplary embodiment of the present invention, the value of n is set to 2. In this embodiment, the first two digits entered into the communication device are viewed as an address identifying number stored within the address book. For example, if the user enters the number ["4",] "4," the algorithm will operate to retrieve the telephone numbers stored at address location 4 and provide them as suggested completions. If the user then enters the number ["2",] "2," the partially entered number is then "42." The algorithm will operate to retrieve the telephone numbers stored at address location 42 and provide them as suggested completions. This automatic assumption, that the user is attempting to access an address book entry, is only applicable to the first two digits the user enters into the communication device. Thus, in the illustrated embodiment with these first two numbers, the system does not look in the memory at all for candidates to suggest to the user.

In the paragraph on page 8, lines 4-7:

It should be understood that although the present invention is described as accessing numbers stored within the memory of the device embodying the present invention, the stored numbers could also reside in an external device. These numbers could then be accessed using any type of wired, wireless or optical interface.

In the paragraph on page 10, lines 1-6:

Fig. 4 is a flow diagram illustrating the processing performed in the memory look-up state 204. Throughout Figs. 4-7, the variable x represents the number of digits entered by the user, and NS represents the number of digits in a stored number, not including pause information. Pause information is a symbol entered into the communication device, such as a ["*"], "*," which instructs the communication device to briefly pause at that particular location in the numerical entry during the dialing process.

In the paragraph on page 11, lines 1-10:

Fig. 6 is a flow diagram illustrating the operation of the memory look-up method when $NS = 7$ or 10 . In Fig. 6, after the process begins 600, if the number of digits entered by the user x is less than or equal to the length of the stored number 601, then the stored number could possibly be a match. Thus, if the x most significant digits of the stored number are equal to the digits that the user has entered into the communication device 602, then the stored number may be the number the user is attempting to dial, and is deemed a match 605. If the x most significant digits are not equal to what the user has entered, the method next compares the least significant digits with the digits entered by the user 603. If the least significant digits are the same, then the number is deemed a match 605. If not, the number is not a match.

In the paragraph on page 11, lines 11-19:

Fig. 7 is a flow diagram illustrating the operation of the memory look-up method when $NS = 11$. In Fig. 7, after the process begins 700, the first inquiry is [,] to determine whether the amount of digits entered x is less than or equal ~~than~~ to 10, and if the x most significant digits of the stored number are the same as the digits entered by the user into the communication device 701. If x is less than or equal to 10 and the x most significant digits match the entered number, then the stored number is a match. If not, then if the stored number NS is shorter in length than the string of digits entered by the user 702, then the number cannot be a match because the stored number is shorter in length and thus is deemed "no match" 703.

In the paragraph on page 12, lines 1-9:

The operation of the present invention can best be understood by examining a few examples. For the example provided, the following assumptions are being made: $n = 2$, $m = 3$, $p = 11$, $q = 11$ and the memory configuration illustrated in Fig. 8 defines the memory content. If the user enters a 7, the address look-up state 203 is entered and the address look-up processing in Fig. 3 is performed. The address look-up process will result in identifying "630111222", "630111222," "6301112223," "6301112224," "6301112224," and "6301112225," the numbers stored at address book location 7, as candidate completions. Once the candidate completions are identified, the display state 206 is entered and the candidate completions are displayed.

In the paragraph on page 12, lines 11-14:

If the user enters another ["7",] "7," then the partially entered number is ["77".] "77." Again, since the number of entered digits is less than or equal to 2, the address ~~lookup~~ look-up state is entered. The address ~~lookup~~ look-up process results in identifying the number "8884446666" (address book location "77") as a candidate completion. Once the candidate completions are identified, the display state 206 is entered and the candidate completions are displayed.

In the paragraph on page 12, lines 15-22:

If the user enters a ["0",] "0," then the partially entered numbers are "770." This is a three ~~digits~~ digit long number, and thus the memory look-up state will be entered. The memory look-up process will then search the call history 803, where outgoing calls 804 and incoming calls 805 are searched for candidates. The only candidate with matching digits in the call history 803 is "7708982234" in the outgoing calls log 804. The display state 206 will then be entered and the candidate completion will be displayed. If the user does not select "7708982234," "7708982234," then the number which was ultimately entered will be stored in the outgoing calls log 804, and will be subject to the next candidate search.